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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/666,928      | 09/21/2000  | Jay Kin Keung        | 10188               | 6748             |

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[REDACTED] EXAMINER

VO, HAI

| ART UNIT | PAPER NUMBER |
|----------|--------------|
| 1771     |              |

DATE MAILED: 07/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 09/666,928             | KEUNG ET AL.        |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Hai Vo                 | 1771                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 22 April 2003.
- 2a) This action is **FINAL**.                  2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 9,10 and 13-20 is/are pending in the application.
- 4a) Of the above claim(s) 9 and 10 is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 13-20 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
 If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a)  The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 0422.
- 4) Interview Summary (PTO-413) Paper No(s). 0723.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 14, 15, 18 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In the claims, the missing of the phrase “by weight of” right after “%” sign renders the claims indefinite because it is unclear what Applicants want to convey, i.e., % by weight or % by volume.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 13, 14, 16-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keller et al (US 5,691,043) in view of Crighton et al (US 6,235,143) as evidenced by Kong et al (US 6,503,635). Keller discloses a sealable opaque multilayer polypropylene film having a five-layer construction meeting the claim limitations (column 7, lines 24-32). Keller discloses the core layer comprising polypropylene homopolymer and 4 to 8 wt % PBT as a cavitating agent (column 4, line 48, column 7, lines 17-18). Keller discloses the top skin layer comprising polypropylene and SiO<sub>2</sub> (column 8, line 29), the bottom skin layer comprising a terpolymer of ethylene-propylene-butylene (column 8, line 1) and SiO<sub>2</sub> (column 8,

line 29). Keller discloses the tie layers comprising propylene and at least one of the tie layers containing 4 to 15 wt % TiO<sub>2</sub> (column 7, lines 25-27). Keller teaches ethylene-propylene-butylene terpolymer having a melting point in the range of about 115°C to 130°C, meeting a value disclosed by Applicants (column 8, lines 1-12). Keller also teaches such terpolymers are available from Chisso under the tradename Chisso 7800 or 7700 series (column 7, lines 5-10). Kong teaches the Chisso 7701 ethylene-propylene-butylene terpolymer having a melting point of 126°C (as evidenced by Kong et al, US 6,503,635, column 5, lines 40-45). Since the melting point of 126°C is not significantly high compared to a value of 122.5°C disclosed by Applicants and further there is no evidence to show that all the terpolymers from Chisso 7800 or 7700 series would have a DSC melting point significantly higher than those used by the present invention. In addition, since Applicants' value of the melting point is within the range disclosed by Keller, there would be a possibility that some terpolymers in the series could have a DSC melting point meeting a value disclosed by Applicants.

Keller is silent as to methyl acrylate as an antiblocking agent. Crighton discloses a heat sealed polymeric film comprising a polymethacrylate antiblock agent in an amount of 500 to 6000 ppm in the skin layer of the film (column 2, lines 32-34 and 44). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have incorporated a polymethacrylate antiblock agent into the top skin layer motivated by the desire to obtain a film having good sealing with high slip on the heat seal jaws. The combination of all the cited

reference meets all the limitations of structure and chemistry of the claims and thus the resulting film would inherently show an improved tear performance in a hot tack test. It is not seen that the film of Keller would have performed differently from the film of the claimed invention. This is in line with *In re Spada*, 15 USPQ 2d 1655 (1990). Products of identical chemical composition can not have mutually exclusive properties.

With regard to claim 14, Keller discloses the core layer comprising polypropylene homopolymer and 4 to 8 wt % PBT as a cavitating agent (column 4, line 48, column 7, lines 17-18). Keller discloses a skin layer comprising 2000 to 15000 ppm silicone oil and 100 to 5000 ppm crosslinked silicone (column 8, lines 40-64). Keller discloses the tie layers comprising 4 to 15 wt % TiO<sub>2</sub> (column 7, lines 25-27). Since the concentration of the additives is a result-effective variable and would have been recognized by one skilled in the art to obtain a multilayer film that is distinguished by a high whiteness, an outstanding opacity, good gloss and excellent sealing properties. Thus, in the absence of unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the film comprising additives that have the concentration instantly claimed since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involved only routine skill in the art. *In re Aller*, 105 USPQ 233.

With regard to claims 16 and 20, Keller discloses a multiplayer film comprising each skin layer adjacent to the core layer having a thickness from 0.5 to 3 microns

(column 8, lines 22-25). Keller discloses a multiplayer film having a thickness ranging from 10 to 60 microns (column 9, lines 37-40). Since the thickness is a result-effective variable and would have been recognized by one skilled in the art to reduce the cost of the production while maintaining a multilayer film that is distinguished by a high whiteness, an outstanding opacity, good gloss and excellent sealing properties. Thus, in the absence of unexpected results, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the film comprising individual layers that have the thickness instantly claimed since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involved only routine skill in the art. *In re Aller*, 105 USPQ 233.

5. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Keller et al (US 5,691,043) in view of Crighton et al (US 6,235,143) as applied to claim 13, further in view of Shreck (US 5,681,208). The combination of the primary and secondary references fails to teach or suggest a coated silica in the skin layer of the film. Shreck discloses a polymeric film comprising a coated silica in the skin layer of the film (comparative example 2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have incorporated a coated silica into the bottom skin layer motivated by the desire to obtain a film having high gloss and low coefficient of friction.
6. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Keller et al (US 5,691,043) in view of Crighton et al (US 6,235,143), Shreck (US 5,681,208), as

applied to claim 17, further in view of Falla et al (US 5,674,944). The combination of Keller, Crighton and Shreck teaches every element in the claims except a phosphite and fluoropolymer as the additives in the core layer. Falla supplies the missing features. Falla discloses the additives including phosphite antioxidant, and fluoropolymer as a processing aid (column 6, lines 28 and 34). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have incorporated phosphite and fluoropolymer into the core layer motivated by the desire to obtain an ease of handling and stabilize the product processing.

***Response to Arguments***

7. The art rejections over Schulmann in view of Keller and Crighton have been overcome by the present amendment.
8. The Applicants' declaration filed on 06/10/2003 has been entered and fully considered but it is not found persuasive to overcome the 103 art rejections over Keller in view of Crighton. The declaration states that presently claimed product and the prior art product are distinct due to the significantly lower minimum seal temperature (MST) which is attributed to the use of an ethylene-propylene-butylene (EPB) terpolymer with a DSC melting point of 122.5°C in the sealant layer of the claimed invention. Keller teaches ethylene-propylene-butylene terpolymer having a melting point in the range of about 115°C to 130°C, meeting a value disclosed by Applicants (column 8, lines 1-12). Keller also teaches such terpolymers are available from Chisso under the tradename Chisso 7800 or 7700 series (column 7, lines 5-10). Kong teaches the Chisso 7701 ethylene-propylene-butylene terpolymer having

a melting point of 126°C (as evidenced by Kong et al, US 6,503,635, column 5, lines 40-45). Since the melting point of 126°C is not significantly high compared to a value of 122.5°C disclosed by Applicants and further there is no evidence to show that **all** the terpolymers from Chisso 7800 or 7700 series would have a DSC melting point significantly higher than those used by the present invention. In addition, since Applicants' value of the melting point is within the range disclosed by Keller, there would be a possibility that some terpolymers in the series could have a DSC melting point meeting a value disclosed by Applicants.

In addition, the scientific evidence shown in Exhibits 3 and 4 provides the relationship between high stereo-regularity and high crystallinity. The evidence has been carefully considered. The examiner agrees that Keller discloses the core layer comprising a modifier to reduce the crystallinity (abstract). However, the claim language does not exclude an embodiment where a multilayer white opaque, plastic film comprising a cavitated core layer that includes a modifier. Nothing in the claims is specific about the structure of the cavitated core layer itself with and without the modifier. Further, the term "high" in the phrase "high stereoregularity" is a relative term and the specification does not provide a standard for ascertaining the requisite degree, and therefore it is not found to be limiting in any patentable sense with respect to the structure of the claimed cavitated core layer .

9. The examiner called Mr. James on 05/23/2003 to suggest the examiner's amendment to place the claims in the condition for allowance. However, Examiner did call Mr. James back to withdraw the indicated allowability in view of the lack of

evidence. The examiner wishes to apologize for the confusion that may have been caused.

***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (703) 605-4426. The examiner can normally be reached on Tue-Fri, 8:30-6:00 and on alternating Mondays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

HV  
July 24, 2003

CHEERYL A. JUSKA  
PRIMARY EXAMINER